

March 20, 2003

Mr. Rick Sprott, Director
Utah Division of Air Quality
Utah Department of Environmental Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820

Attention: Milka Radulovic, NSR Engineer

Dear Mr. Sprott:

Notice of Intent: Revision to Scope of Modification

On January 11, 2002, the Utah Division of Air Quality (UDAQ) issued to Intermountain Power Service Corporation (IPSC) an approval order (DAQE-049-02) to make certain modifications to the Intermountain Generating Station (IGS). On September 23, 2002, IPSC submitted a Notice of Intent (NOI) to clarify and adjust the scope of those modifications, known as the Dense Pack Uprate Project, as well as receive permitting for other changes. Today's letter is being submitted to summarize the Dense Pack Project and certain other changes for which we are seeking permitting.

BACKGROUND

Approval Order DAQE-049-02 allowed IPSC to make certain changes provided IGS operated those changes as a minor modification pursuant to actual to future actual provisions under Utah's Prevention of Significant Deterioration (PSD) rules. Changes allowed under that Approval Order as described in its original NOI included:

- ☐ Increasing heat input to main boilers
- ☐ Adding surface area to main boilers
- ☐ Replacing each unit high pressure turbine with new technology turbines
- ☐ Replacing certain relief valves with safety valves in main boilers
- ☐ Adding wall rings to each scrubber module
- ☐ Adding helper cooling towers and cooling system enhancements
- ☐ Enhancements to generators, isophase & motor buses, transformers, boiler feed pumps, high pressure lines, control systems, and other similar changes.

The September 23, 2002 NOI sought:

- ☐ To clarify where surface area was actually to be added in main boilers
- ☐ To replace power supplies and motor drives to induced fans

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- ☐ Replacement-in-kind acknowledgment for low-NOx burners
- ☐ To add overfire air ports to main boilers for NOx control.

Full descriptions of those changes were discussed in that NOI and in subsequent letters, e-mails, and meetings with your staff. Additionally, in order to assess how OFA affects both NOx and CO emissions, an experimental AO was issued on February 14, 2003 to allow installation and testing of an OFA system on Unit One at IGS.

PERMIT OPTIONS

Of particular interest for this letter is how to treat the permitting for overfire air (OFA). IPSC initially sought to have OFA permitting as a minor modification under certain PSD provisions. However, once testing of the OFA system is complete, the results are likely to show that CO may increase in major net significant amounts (greater than 100 tons per year) when NOx is controlled to low emission rates.

For the dense pack modifications, IPSC chose to modify combustion for NOx control during increased heat input, rather than utilize technological add-on controls. Combustion in the boiler was fine-tuned to optimize performance against NOx emissions using such methods as burner-out-of-service, excess oxygen control, fuel management, and other boiler operational changes.

Although such practices have been successful, IPSC believes that replacing this combustion methodology with technical add-on controls would better optimize boiler performance and control of NOx emissions.

The use of OFA will allow IPSC to control NOx without a significant net increase due to the dense pack modifications. However, IPSC believes it is possible that certain OFA configurations can cause a net significant increase in CO emissions. Therefore, IPSC seeks permitting of OFA as a major modification for CO under PSD.

PSD for CO

IPSC has previously provided air impact modeling for CO increases from 1,989.6 tons per year (as calculated by AP-42) to 5,171.9 tons per year (as projected by vendor data). The modeling analysis shows insignificant air quality impacts from CO due to the use of OFA, and that no Class II NAAQS or PSD increments will be threatened. The report further indicates that no Class I area AQRV can be adversely affected.

IPSC has reviewed Best Available Control Technology (BACT) for CO for large coal fired boilers, and has found that there are no add-on controls commercially available nor technically feasible for IGS. Generally accepted BACT for CO is Good Combustion Practice (GCP). IPSC has provided a detailed discussion on what GCP entails for boiler operation utilizing OFA.

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IPSC has discussed with UDAQ aspects of ensuring GCP to meet BACT. These include the use of a permit limit for CO and a method to monitor CO, at least parametrically. Specifically, IPSC proposes to amend our current permit limit for CO of 1,989.6 tons per year to 5,171.9 tons per year, as modeled. To show GCP, IPSC proposes to use continuous monitoring data of NOx rates and parametric excess oxygen data to calculate CO emissions and compare those emissions against data collected from OFA testing.

TITLE V

Inasmuch as permit conditions may be modified that will affect the IPSC Title V operating permit, ISPC requests that the Title V permit, when renewed, is also amended accordingly.

IPSC is including those fees required for PSD permit applications. Should you or your staff have any questions, please contact Mr. Dennis Killian, Superintendent of Technical Services, at 435-864-4414, or by e-mail at dennis-k@ipsc.com.

Inasmuch as this letter and previously submitted and associated material may affect the IPSC Title V Operating Permit, I hereby certify that, based upon the information and belief formed after reasonable inquiry, the statements and information contained or referenced in this document are true, accurate, and complete.

Cordially,

George W. Cross
President, Chief Operations Officer, and Title V Responsible Official

BP/RJC:jmg
Enclosure: Filing Fee

cc: Blaine Ipson, IPSC
Bruce Moore, LADWP
James Holtkamp, LLG&M

Lynn Banks, IPSC
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